Instructions

Melt Pressure Sensor

PT-EX-X-1 Series

CE

attestation

ISO 9001, 14001, 45001,10002 & 31000

Please read this instruction manual carefully before installation

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Content

Introduction

PT-EX-X Melt pressure sensor apply special cavity type exposed structure design, with high precision and high response speed.

Application

PT-EX-X series is designed for measurement and control of melt pressure in special positions of small space such as chemical fiber equipment, rubber and plastic machinery and mold cavity.

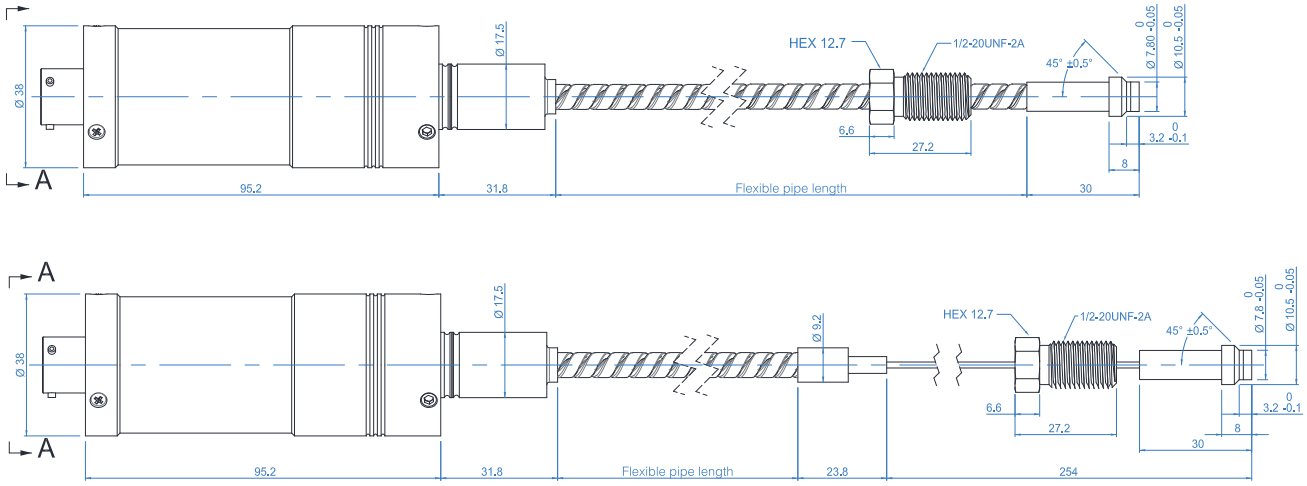
Product Features

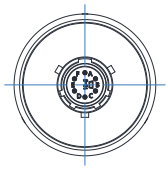
· Precision is better than ±0.5%FS
· 80% internal calibration
· Exposed structure
· Good stability and repeatability

Technical Data

Pressure Range	0~35bar ; 0~2000bar		0~100bar ; 0~2000bar
Accuracy	±0.5% ; ±0.25%		
Over load Pressure	1.5FSO		
Bridge Resistance	350Ω Wheatstone bridge		
Output Signal	4-20mA	0~10Vdc , 0~5Vdc	3.33mV/V
Power	9~36Vdc	18~36Vdc	6~12Vdc(10Vdc is standard)
Load Resistance Ω	<(U-9)/0.02	>10k	---
Calibration	80%FSO		
Process Connection	1/2-20UNF , Flange connection		
Insulation Resistance (50Vdc)	1000MΩ		
Diaphragm Material	17-4PH , inconel718 , C276		
Diaphragm Max Temp	400 ℃		
Film Material	TiAIN		
E-connection	6-pin connector(Standard) , 8-pin connector		
Electrical Environment Temp	-20℃ ~ 85°C		
Protection Degree	IP65		
Installation Torque	<30Nm		
Filing Material	Mercury filing		

Dimensions



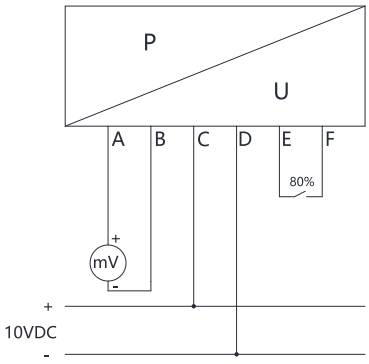


A-A

Electrical connection & Debugging

After the pressure sensor has been installed on the line, the electrical connections must be carried out in accordance with the connection mode shown in the wiring diagram below. The PT-EX-X pressure sensor is equipped with an integrated amplifier circuit. The calibration process must be that the pipeline is heated and the pressure is zero.The zero point is adjusted by activating the automatic rezero function. Autozero function is via shorting two pins together like following diagram, mV signal does not have this function, can be rezero through the back-end instrument.Then 80% of the output signal is detected (see wiring diagram), and the pressure sensor will provide a standard 80% measured value signal.

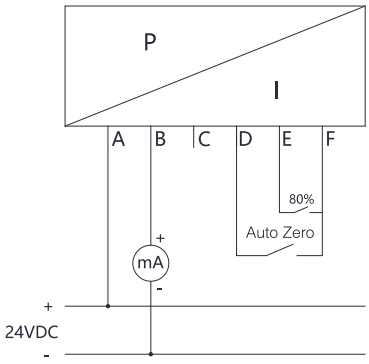
3.33mV/V Output (4-wire)



6-pin connector /PT02A-10-6P

PIN	Function	Wire Color
A	Signal+	Red
B	Signal-	Black
C	Power+	White
D	Power-	Green
E	80%+	Blue
F	80%-	Orange

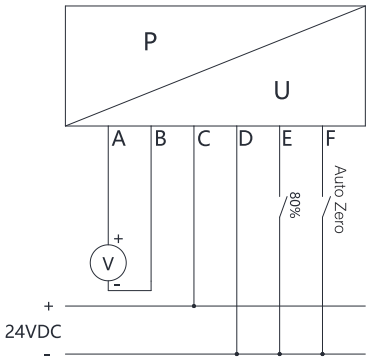
4□20mA Output (2-wire)



6-pin connector /PT02A-10-6P

PIN	Function	Wire Color
A	Power+	Red
B	Power-	Block
C		White
D	Shorting D&F to rezero+	Green
E	80%+	Blue
F	Shorting D&F to rezero+/80%-	Orange

0□5V / 0...10V (4-wire)



6-pin connector /PT02A-10-6P

PIN	Function	Wire Color
A	Signal+	Red
B	Signal-	Block
C	Power+	White
D	Power- / 80%- / Shorting D&F to rezero-	Green
E	80%+	Blue
F	Shorting D&F to rezero+	Orange

*B and D pins are connected internally

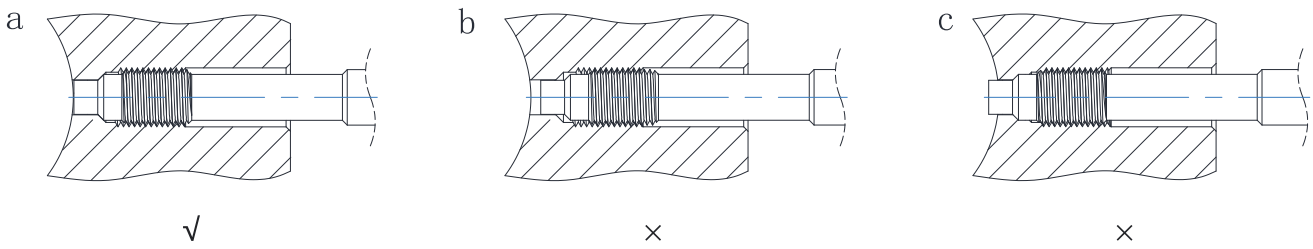
Installation & Removal

Installation

When installing the pressure sensor, the sensor hole should be within the size requirement marked in following drawing and the assembly accuracy can be checked by testing bolts. Before installing the sensor , first clean the impurities in the hole and between the threads, then the thread of the sensor is coated with heat-resistant slurry, the screw teeth can be avoided. The installation force is very important, the installation torque of the sensor can only act on the shaft (hexagon), do not apply any force to the head of the sensor. The housing should be kept away from high temperature areas.

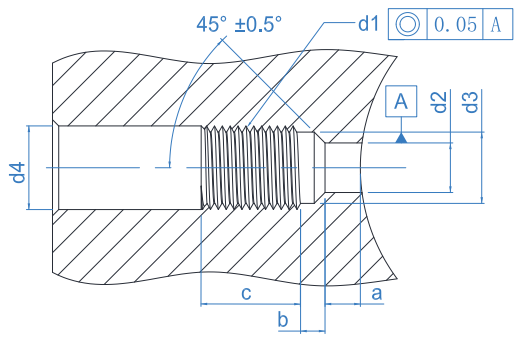
1/2-20 UNF /M14×1.5= Maximum starting torque: 40Nm

M18 x 1.5 = Maximum starting torque: 50 Nm



Removal

The removal of the pressure sensor must be done under heating conditions (plastic melting point). When removing the sensor, note that the diaphragm has no contact pressure. The force to unload the sensor must be applied on the shaft (hexagon), and do not apply any force to the head of the sensor.



d1	M18×1.5	M14×1.5	1/2-20UNF-2A
d2	Ø $9.9^{+0.1}$	Ø $7.9^{+0.1}$	Ø $7.9^{+0.1}$
d3	Ø $16.1^{+0.1}$	Ø $11.7^{+0.1}$	Ø $10.7^{+0.1}$
d4	Ø 20	Ø 15	Ø 14
a	$6.1^{-0.1}$	$5.7^{-0.1}$	$5.7^{-0.1}$
b	$4^{-0.2}$	$3.2^{-0.2}$	$3.2^{-0.2}$
c	25	19	19

Sensors cleaning

In order to clean the diaphragm, the sealing surface and thread of the transmitter must have the same temperature as the melting point of the plastic. The diaphragm and sealing surface can be cleaned with soft cloth, and rigid rod can be cleaned with steel brush or copper brush. (Do not touch diaphragm surface with the steel brush.)

Transport and storage

PT-EX-X pressure sensor is usually packed separately. At the front thread of the rigid rod, the induction diaphragm is protected by a protective cap. This protective cap should be tightened at any time during storage, and only opened during installation.

Note: Mounting brackets, extension cables, connectors, cleaning kits, drill kits, dummy plug etc accessories, please contact with us.